REMARKS

Applicant thanks the Examiner for the very thorough consideration given the present application.

Claims 1-19 and 22-26 are now pending in the application.

Claims 9 and 21 are indicated as being allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims.

Claims 5, 11, and 15 are amended.

Claims 20 and 21 are canceled without prejudice to the subject matter contained therein.

The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 102

Claims 11-13, 15, and 20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Jacobs (U.S. Pat. No. 2,608,855). Claims 11-14, 16 and 17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Olivieri (U.S. Pat. No. 4,413,503). Claims 11, 16-20, 23 and 24 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Harano (JP 57153236A). These rejections are respectfully traversed.

The Office Action states that claim 21 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 11 has been amended to include the recitations of claims 20 and 21. Accordingly, Applicant submits that claim 11 (and claims 12-19 and 22 depending therefrom) is allowable.

With regard to dependent claims 12-19 and 22, these claims depend from independent base claim 11, which applicant believes to be allowable for at least the reasons stated above. As such, applicant submits that dependent claims 12-19 and 22 are also allowable.

Claims 20 and 21 have been cancelled without prejudice, thereby rendering moot any rejections thereto.

With regard to independent claim 23, Harano cannot anticipate claim 23 because Harano does not disclose each and every feature of claim 23. For example, Harano

does not disclose an internal pressure vessel disposed within a cavity defined by supporting structure. In Harano FIG. 1, the vessel 1 is shown without any surrounding supporting structure whatsoever. Thus, the vessel 1 is not an internal pressure vessel disposed within a cavity defined by supporting structure. Therefore, Harano also does not disclose method of locating leaks in an internal pressure while the internal pressure vessel remains within a cavity defined by supporting structure. And because Harano does not disclose any supporting structure associated with the vessel 1, Harano also does not disclose "sealing a cavity annulus defined generally between the internal pressure vessel and the supporting structure."

The Office Action states that the vinyl sheet 10 in Harano is considered to be part of the supporting structure, given the broadest reasonable definition of supporting. But this vinyl sheet 10 does not support the vessel 1 or the nozzle 2. The vinyl sheet 10 is simply placed over the outside of the nozzle 2 to form a space B only after a defect has been detected. As shown in Harano FIG. 2, the vinyl sheet 10 is not even in physical contact with the nozzle 2. Given that vinyl is a relatively flexible material and that the vinyl sheet 10 is only applied after a defect has been detected, applicant submits that the vinyl sheet 10 is not supporting structure.

Because Harano does not disclose each and every feature of independent claim 23, applicant respectfully submits that Harano does not anticipate claim 23. For at least the above reasons, applicant respectfully requests reconsideration and withdrawal of the rejection of claim 23.

With regard to dependent claims 24 through 26, these claims depend from independent base claim 23, which applicant believes to be allowable for at least the reasons stated above. As such, applicant submits that dependent claims 24 through 26 are also allowable.

In addition, claim 24 further recites "removably coupling a corresponding one of a plurality of isolation cups to the detection device." Even assuming *arguendo* that the component 5 in Harano is an isolation cup, Harano does not disclose a plurality of isolation cups. For this additional reason, applicant submits that claim 24 is allowable.

REJECTION UNDER 35 U.S.C. § 103

Claim 25 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Harano (Japanese Pat. No. 57153236A) in view of Jacobs (U.S. Pat. No. 2,608,855). Claims 1, 3-8, 10, 22 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Harano (Japanese Pat. No. 57153236A) in view of Billias (U.S. Pat. No. 3,645,816). Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Harano (Japanese Pat. No. 57153236A) in view of Jacobs (U.S. Pat. No. 2,608,855). These rejections are respectfully traversed.

Independent claim 1 recites a method of detecting leaks in a fuel tank comprising sealing a cavity annulus defined generally between the fuel tank and the mobile platform supporting structure, introducing pressurized fluid into the cavity annulus to cause pressurized fluid to flow from the cavity annulus through a leak into the fuel tank, monitoring the fuel tank to detect leakage of pressurized fluid into the fuel tank, and wherein the fuel tank remains disposed within the cavity defined by the mobile platform supporting structure during said sealing, introducing, and monitoring.

As noted above, Harano clearly fails to disclose an internal pressure vessel disposed within a cavity defined by supporting structure. In Harano FIG. 1, the vessel 1 is shown without any surrounding supporting structure whatsoever. Thus, the vessel 1 is not an internal pressure vessel disposed within a cavity defined by supporting structure.

The Office Action states that the vinyl sheet 10 in Harano is considered to be part of the supporting structure, given the broadest reasonable definition of supporting. But this vinyl sheet 10 does not support the vessel 1 or the nozzle 2. The vinyl sheet 10 is simply placed over the outside of the nozzle 2 to form a space B only after a defect has been detected. As shown in Harano FIG. 2, the vinyl sheet 10 is not even in physical contact with the nozzle 2. Given that vinyl is a relatively flexible material and that the vinyl sheet 10 is only applied after a defect has been detected, applicant submits that the vinyl sheet 10 is not supporting structure.

In addition, the Billias patent teaches away from the method recited in claim 1. See, for example, Billias, column 2, lines 46-47: "Leak detection is normally a very simple matter since it can be done visually by the technician." In Billias, the leaks are detected by visually observing fuel leaking (e.g., seeping or running) out of the fuel tank.

Nowhere does Billias disclose, teach or even remotely suggest positioning a detection device within a fuel tank to sniff for/detect leakage of pressurized fluid into the fuel tank. Harano and Billias (and other cited references) also fail to recognize the advantages of such methods, which include the ability to detect and pinpoint the location of pressurized fluid leakage at any point within the fuel tank. For example, Harano only provides for detecting vacuum leakage at one location 12. Likewise, Oliveri only provides for detecting leakage of a detectable gas into the storage tank 11 along a bottom plate 12 of the tank 11. Further, Jacobs uses an analyzer 13 external to a vessel 11 to measure concentrations of Helium after the Helium has escaped from the vessel 11 under the assistance of a vacuum pump. But Jacobs appears to only be useful for determining a rate of in-leakage in closed vessels, and not for pinpointing the origin of a leak.

Given that Harano and Billias fail to even remotely disclose or suggest the method steps recited by claim 1, the rejection of this claim should be withdrawn. For at least the above reasons, the Patent Office is respectfully requested to reconsider and withdraw the § 103 rejection of claim 1.

With regard to dependent claims 2-8, 10, 22, 25, and 26, these claims each depend from a claim shown above to be allowable. Accordingly, Applicants respectfully submit that claims 2-4, 10-14, 21, 22, and 24 are also allowable for at least the reasons given above in connection with the independent claim from which it depends.

In addition, claim 7 further recites "removably coupling a corresponding one of a plurality of isolation cups to the detection device." Even assuming *arguendo* that the component 5 in Harano is an isolation cup, Harano and Billias do not disclose, teach or suggest a plurality of isolation cups. For this additional reason, applicant submits that claim 7 is allowable.

ALLOWABLE SUBJECT MATTER

The Office Action states that claims 9 and 21 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. As noted above, claim 11 has been amended to include the recitations of claims 20 and 21. As such, claim 11 is in condition for allowance.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (314) 726-7500.

Respectfully submitted,

Dated: 11/04/2004

By: _____
Anthony Fussner, Reg. No. 47,582

HARNESS, DICKEY & PIERCE, P.L.C.
7700 Bonhomme, Suite 400
St. Louis, Missouri 63105
(314) 726-7500

[AGF/dmkd]